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(19) Japan Patent Office

(12) Japanese Laid Open Patent Application

(11) Patent application disclosure no. Hei 11-21227

(43) Jan. 26, 1999

(21) Application no. Hei 9-187405

(22) Date filed: June 27, 1997

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(54) Title of the Invention

Cosmetic material

(57) Summary

Objective

To present a cosmetic material which is excellent in terms of user friendliness, meaning that it is easy to coat on the skin, and has a soft feel, moisturizing without stickiness.

Problem resolution means

A cosmetic material comprising partial cross linked poly ether modified organo polysiloxane and gel composition comprising polyacryl amide, hydrocarbon and a non ionic surface active agent.

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Claims

Claim 1

A cosmetic material comprising partial cross linked polyether modified organo poly siloxane and gel composition comprising polyacryl amide, hydrocarbon and a non ionic surface active agent.

Claim

A cosmetic material according to Claim 1, where the content of said partial cross linked polyether modified organo poly siloxane is in the range of 0.1 ~ 15 weight %.

Claim

A cosmetic material according to Claims 1 or 2, where the content of said gel composition is in the range

of 0.1 ~ 10 weight %.

#### Detailed explanation of the Invention

0001

#### Industrial applications

The present invention is related to a cosmetic material which is excellent in terms of user friendliness and has a soft feel, more specifically, a cosmetic material comprising partial cross linked polyether modified organo poly siloxane and get composition comprising polyacryl amide, hydrocarbon and a non ionic surface active agent.

0002

#### Prior art of Technology

There are lotion forms, emulsion forms, cream form, powder forms, and solid powder forms of cosmetic materials. There are a conditioners which have a lotion form, a milk lotion, a makeup foundation, and a liquid foundation with an emulsion form and a powder foundation with a powder form in cosmetic materials.

0003

#### Problems overcome by the invention

A conditioner provides a refreshing touch. Milk lotions provide a slightly wet feeling. Cream provides richness in terms of flavor and a thick feel. Each material provides moisturizing and is succulent to the skin. However, when a conditioner or emulsion is applied to the skin, there is a chance that a conditioner or emulsion runs off from the hands or face and makes the floor, chairs, tables and clothes dirty. On the other hand, in some cases, cream provides a sticky feeling because the oil content is great. Because of these problems, there is a demand for a form in which the cosmetic material which will not run off, but rather one which provides a refreshing feeling without any sticky feel.

0004

Problem resolution means

After investing a great amount of effort to solve the problems mentioned above, the inventors of the present invention found that a cosmetic material which is excellent in terms of user friendliness in which the cosmetic material does not run off like a conditioner and which provides a refreshing makeup can be obtained using a partial cross linked polyether modified organo polysiloxane and gel composition comprising poly acryl amide, hydrocarbon and a non ionic surface active agent, thereby completing the present invention. Namely, the present invention provides a cosmetic material comprising a gel composition of poly acryl amide, hydrocarbon and non ionic surface active agent and a partial cross linked poly ether modified organo poly siloxane. A detailed explanation follows.

0005

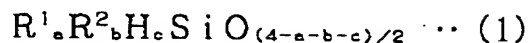
Embodiment of the Invention

The partial cross linked polyether modified organo polysiloxane used for the present invention is a polymer made with the addition polymerization of organo hydrogen polysiloxanes with an aliphatic unsaturated group containing compound, and for embodiments, said polymer was cited as an embodiment in Japanese Laid Open Patent Application Hei 4-272932, and Japanese Laid Open Patent Application Hei 5-140320.

Partial cross linked poly ether modified organo polysiloxane is a polymer having the components indicated in general formula (1) and general formula (A) as essential components in a combination of organo hydrogen poly siloxane indicated in the general formula (1)

0006

【Chemical 1】

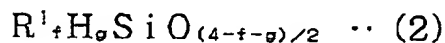


0007

[In the formula,  $R^1$  is as same kind or different kind of non substituent or substituent alkyl group, aryl group, aralkyl or halogenated hydrocarbon with carbon number of 1 ~ 18,  $R^2$  is a poly oxyalkylen group indicated with a general formula  $C_n H_{2n} O (C_2 H_4 O)_d (C_3 H_6 O)_e R^3$  {  $R^3$  is hydrogen atom or a saturated aliphatic hydrocarbon group with carbon number of 1 ~ 10 or a group indicated by  $-(C O)-R^4$  ( $R^4$  is a saturated aliphatic hydrocarbon group with carbon number of 1 ~ 5),  $d$  is an integer number of 2 ~ 200,  $e$  is integer number of 2 ~ 200,  $d + e$  is integer number of 3 ~ 200,  $n$  is 2 ~ 6 }  $a$  indicates  $1.0 \leq a \leq 2.5$ ,  $b$  indicates  $1 \leq b \leq 1.0$ ,  $c$  indicates  $0.001 \leq c \leq 1.0$ , respectively] and / or organo hydrogen poly siloxane indicated in general formula (2)

0008

【Chemical 2】

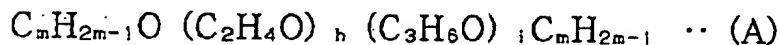


0009

[In the formula,  $R^1$  is the same as above,  $f$  indicates  $1.0 \leq f \leq 3.0$ ,  $g$  indicates  $0.001 \leq g \leq 1.5$ , respectively] and poly oxyalkylene is indicated in the general formula (A)

0010

【Chemical 3】

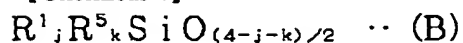


0011

[In the formula, h is integer number of 2 ~ 200, i is integer number of 2 ~ 200, h + i is integer number of 3 ~ 200, m is 2 ~ 6] and / or organo poly siloxane indicated in general formula (B)

0012

【Chemical 4】



0013

[In the formula,  $R^1$  is the same as above,  $R^5$  is monovalent hydrocarbon group of carbene number of 2 ~ 10 having aliphatic unsaturated group in the end, j indicates  $1.0 \leq j \leq 3.0$ , k indicated  $0.001 \leq k \leq 1.5$ , respectively]

0014

Partial cross linked poly ether modified organo poly siloxane polymer is blended preferably in the range of 0.1 ~ 15 weight % (from here, just described as 「%」), more preferably, in the range of 0.3 ~ 8 %. These partial cross linked polyether modified organo polysiloxane polymers can be used with only one kind or more than 2 kinds as necessary.

0015

For polyacryl amide in the gel composition used in the present invention, the polymer has 1,000~1,000,000 in molecular weight. The amount for addition should be 1.0 ~ 80.0 % in the gel composition.

0016

For hydrocarbon, there is no limit for usage, for embodiment, liquid paraffin, petroleum jelly, ceresin, squalen, microcrystalline wax can be added, but especially iso paraffine with carbon number of 4 ~ 20 is more preferable. The added amount of hydrocarbon should be in the range of 1.0 ~ 60.0 % in the gel composition.

0017

For a non ionic surface active agent, there is no limit if it is non ionic, especially, poly oxyethylene alkyl (carbon number 12 ~ 24) ether, polyoxy ethylene sorbitan fatty acids are preferably used. The added amount of the non ionic surface active agent should be 0.1 ~ 20 % in the gel composition.

0018

For a gel composition comprising polyacryl amide, hydrocarbon and non ionic surface active agent, for embodiments, sepigel 305, sepigel 501 can be used. In a cosmetic materials of the present invention, the added amount of the gel composition comprising polyacryl amide, hydrocarbon and non ionic surface active agent should be in the range of 0.1 ~ 1.0 %, more preferably, in the range of 0.3 ~ 5 %.

0019

To a cosmetic material of the present invention, in the range where effect for the present invention is not prevented, solid, semi solid, liquid oil agent, alcohols, water soluble polymer, gelatin, surface active agent, moisture retention agent, component for skin beauty, ultraviolet light absorber, body color, inorganic colorant, organic colorant, organic powder, pearl agent, organic modified clay mineral, synthetic resin, synthetic resin emulsion, antioxidant inhibitor, antiseptic agent and perfume material may be included.

0020

For a cosmetic material of the present, included are emulsion, cream, beauty liquid, makeup foundation, liquid foundation, eye shadow and rouge.

0021

#### Embodiments

As more detailed explanation of the present invention will be made with reference to embodiments. However, the present invention is not limited to these embodiments.



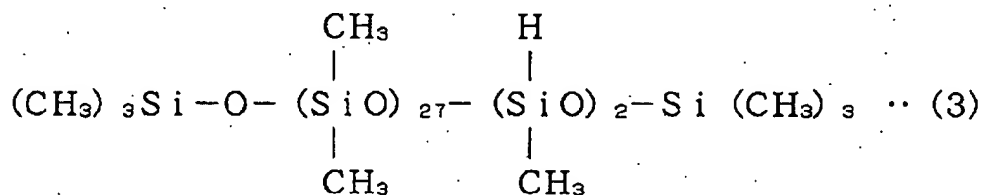
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#### Manufacturing embodiment 1

In a reaction vessel of partial cross linked poly ether modified organo polysiloxane, 100g of organo hydrogen polysiloxan indicated in the average composition formula (3)

0023

#### 【Chemical 5】



0024

The amount of 62g of ethanol, 23.6g of poly oxyalkylene indicated in the average composition formula (4) and 0.3 of 3% chloroplatinic acid ethanol solution were placed, and 2 hours agitation is conducted while maintaining the inside temperature at 70 ~ 80 C. Then the solvent is removed under pressure to obtain a granulated polymer.

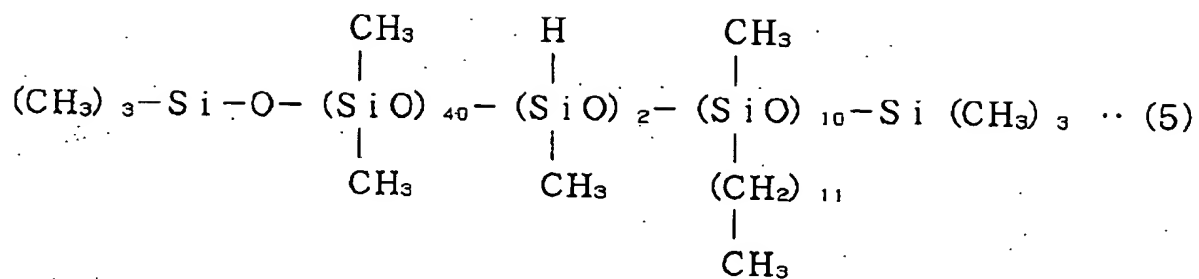
0027

#### Manufacturing embodiment 2

In a reaction vessel of partial cross linked poly ether modified organo polysiloxane, 100g of organo hydrogen polysiloxan indicated in the average composition formula (5)

0028

#### 【Chemical 7】



0029

The amount of 62 g of ethanol, 2.6g of the same poly oxyalkylene as used in embodiment 1 and 0.3 of 3% chloro platinic acid ethanol solution are placed, and 2 hours agitation conducted while maintaining the inside temperature at 70 ~ 80 C. Then the solvent is removed under pressure to obtain a granulated polymer.

0030

Sensory evaluation was made after cosmetic materials with components indicated in the below table 1 for embodiments 1 ~ 3 and comparative embodiments 1 ~ 2. were prepared.

0031

【Table 1】

(Component)	(%)				
	Embodiments			Comparative embodiments	
	1	2	3	1	2
1. Partial cross linked polyether modified organopolysiloxane (manufacturing embodiment 1)	0.8	1.6	4.0	NA	6.0
2. Squalene	3.2	6.4	16.0	16.0	16.0
3. Decamethyl cyclopentacycloxane	4.0	7.0	10.0	NA	10
4. Polyether modified silicone	0.2	0.2	0.2	0.2	0.2
5. Sepigel 305	4.0	0.5	1.2	2.0	NA
6. 1, 3 butylene glycol	10.0	10.0	10.0	10.0	10.0
7. Purified water	Residual	Residual	Residual	Residual	Residual
(Evaluation items)					
ease to coat	◎	◎	◎	△	△
light spreading	◎	◎	◎	△	×
Moisturizing after coating	○	◎	◎	○	△
No stickiness after coating	◎	◎	○	×	△

0032

(Manufacturing method)

Cosmetic materials were prepared with components 5 ~ 7 added under agitation to what components 1 ~ 4 were blended with 3 axial roller

0033

(Evaluation method)

Ten expert members made 5 step judgments according to the following criteria on the ease of coating of the cosmetic materials, the ease of spreading, moisturizing feeling after coating, non stickiness after coating, and then obtained an average score for a final judgment.

[Evaluation]

[Content]

5 point : Excellent

4 point : Good

3 point : Fair

2 point : Slightly defect

1 pont : Defect

[Judgment]

□ : Not lower than 4.5 point in average

○ : Not lower than 3.5 and lower than 4.5 point in average

△ : Not lower than 2.5 and lower than 3.5 point in average

× : Lower than 2.5 point in average

Results obtained from the evaluation method mentioned above is shown in Table 1 as well.

0034

As is obvious from the results of Table 1, embodiments 1 ~ 3 related to the present

invention shows excellence in user friendliness because it is easy to coat on skin, and has a soft feeling because it provides moisturizing without stickiness.

0035

Embodiment 4 Liquid foundation (component)		(%)
1	partial cross linked poly ether modified organo polysiloxane in manufacturing embodiment 2	1.2
2.	Squalene	3.8
3.	Glycerin trioctylate	2.0
4.	Decamethyl cyclo pentacyclohexane	8.0
5.	Titanium oxide	6.0
6.	Talc	2.0
7.	Mica	3.0
8.	Iron oxide	appropriate amt.
9.	Glycerin	3.0
10.	1,3 butylene glycol	8.0
11.	Sorbitan sesky oleinate	0.4
12.	Soy bean phospholipid	0.2
13.	Sbigel 305	1.0
14.	Antiseptic agent	appropriate amt
15.	Purified water	remainder

#### 【0036】 (Manufacturing method)

A : Blend components 5 ~ 12 with 3 axial roller.

B : Blend components 1 ~ 4 with 3 axial roller.

C : Add A to components 13 ~ 15 and blend well.

D : Prepare liquid foundation by degassing and packaging after blend and emulsifying B and C..

Embodiment 4 provides a liquid foundation which is easy to coat and has some

moisturizing without stickiness.

**【0037】**

**Embodiment 5 Makeup basement**

	(component)	(%)
1	partial cross linked poly ether modified organo polysiloxane in manufacturing embodiment 2	0.8
2.	Glycerin trioctylate	2.0
3.	Squalene	3.0
4.	Decamethyl cyclo pentacyclohexane	5.0
5.	Ultra violent absorber	quantitatively
6.	Poly ether modified silicone oil	0.1
7.	Sepigel 305	1.0
8.	1,3 butylene glycol	8.0
9.	Antiseptic agent	quantitatively
10.	Purified water	residual quantity

**0038 (Manufacturing method)**

A makeup base is prepared by blending and emulsifying components 1 ~ 6, which were blended with a 3 axial roller to components 7 ~ 10.

Embodiment 5 provides a makeup foundation which is easy to coat and has some moisturizing without stickiness.

**0039**

**【Efficacy of the invention】**

As explained above, a cosmetic material of the present invention provides a cosmetic

material featuring items for user friendliness, such as no running off, light spreading, a moisturized feeling, no sticky feeling, which make it difficult to meet all the requirements in conventional emulsion type cosmetic materials.